Remarks

The Applicants respectfully request reconsideration of the application in view of the foregoing amendments and the following remarks.

Claims 1-66 are pending in the application. The Applicants have amended claims 1, 12, 23, 39, 43-46, 48, 51-53, 56, 57, 61, and 62. The Applicants have added claims 64-66.

Claim Rejections – 35 U.S.C. § 102

In the Office action dated June 28, 2005 ["Office action"], the Examiner rejected claims 1-4, 6-15, 17-26, 28-42, 45-50, and 53-60 as being anticipated by U.S. Patent No. 5,933,451 to Ozkan et al. (Ozkan). The Applicants respectfully disagree.

I.   Claims 1-4, 6-15, 17-26, 28-42, 45-50, 53-60, and 63-66 should be allowable.

A.   Claims 1, 12, and 23 should be allowable.

Claim 1, as amended, recites:

> after encoding of data, using at least two sets of parameters, each of the at least two sets of parameters comprising rate data and buffer size data, to determine an operating condition for decoder buffer management.

Claim 12, as amended, recites:

> at the time-varying-signal decoder, using at least two of the sets of parameters to determine an operating condition.

Claim 23, as amended, recites:

> a first mechanism that determines at least two sets of parameters after encoding, each of the at least two sets of parameters comprising rate data and buffer size data, for maintaining the decoder buffer during decoding such that it does not overflow or underflow.

Ozkan does not teach or suggest the above-cited language of claims 1, 12, and 23, respectively. Ozkan describes a complexity analyzer that analyzes the complexity of several channels of data. (*See* Col. 3:34-44.) An overall available bit rate is allocated between the various channels of data by a bit rate allocator of an encoder system depending on their relative complexity. (*See* Col. 3:42-44; Figs. 1-2.) Each channel is coded by a constant bit rate coder at the allocated rate for that channel. (*See* Col. 3:22-34; Figs. 1-2.)

The Examiner cited Column 11, lines 5-57 of Ozkan as teaching a "mechanism that determines a size of the decoder buffer based on the rate data, or determines a rate of transferring data from the encoder buffer to the decoder buffer based on the buffer size data, and decoder buffer fullness data." (Office Action at 2.) However, the determinations discussed in the cited portion of Ozkan are part of determining the bit rate allocations used by multiple constant bit rate encoders. (Col. 11:49-53 ("The minimum reduced bit rate allocation $R_{reduced}$ for channel I . . . is given in equation (9) . . . If such limits are imposed . . . those bit rate allocations are checked . . . ."); *see also* Figs. 1-2 (illustrating multiple channels being processed by multiple constant bit rate encoders, each receiving control signals from a bit rate allocator).) Ozkan clearly shows the bit rate allocator that makes those determinations as part of quality/rate control in the encoder system during encoding of data. (*See* Figs. 1-2.) Making quality/rate control determinations in an encoder system *during encoding* (as in Ozkan) leads away from the above-cited language of claims 1 ("*after encoding* of data, using..."), 12 ("*at* the time-varying-signal *decoder*, using..."), and 23 ("determines ... *after encoding* ..."), respectively.

Moreover, the bit rate allocations in Ozkan are used as control signals in each of the channel encoders, as is illustrated in Figures 1-2 of Ozkan. Specifically, the determined bit rates are the rates used by the constant bit rate encoders. (*See* Col. 3:22-34; Figs. 1-2.) Determining bit rates used in the process of encoding data before it is even sent to the decoder (as in Ozkan) leads away from the above-cited "after encoding" language of claims 1 and 23, respectively, and also leads away from the above-cited "at the ...decoder" language of claim 12. Ozkan's encoder-focused quality/rate control approach is even further from teaching or suggesting determining "an operating condition for decoder buffer management" (claim 1) and "parameters ... for maintaining the decoder buffer during decoding" (claim 23), respectively.

Accordingly, Applicants respectfully submit that claims 1, 12, and 23 are allowable.

B.   Claims 39, 46, 48, and 56 should be allowable.

Claim 39, as amended, recites:

> receiving at least two different alternative sets of parameters for decoder buffer management.

Claim 46, as amended, recites:

processing video data to produce encoded video data and hypothetical reference decoder information, the hypothetical reference decoder information comprising at least two different alternative sets of parameters.

Claim 48, as amended, recites:

receiving at least two initial sets of parameters for decoder buffer management.

Claim 56, as amended, recites:

a mechanism that receives and processes at least two different alternative sets of buffer management parameters.

Ozkan does not teach or suggest the above-cited language of claims 39, 46, 48, and 56, respectively. The rate and buffer-related operating conditions in Ozkan are dictated by the encoder system, and are set to specific values that are used in the encoding process. (See Fig. 2 (illustrating control signals from the bit rate allocator to a constant bit rate encoder).) Control signals for quality/rate control in an encoder (as in Ozkan) are different than, and lead away from, "parameters for decoder buffer management" (claims 39 and 48), "hypothetical reference decoder information comprising at least two different alternative sets of parameters" (claim 46), and "buffer management parameters" (claim 56), respectively.

The Applicants further note that in Ozkan the encoder system dictates specific rate and buffer size operating conditions that are concurrently used. This is different than, and leads away from, "different alternative sets of parameters" (claims 39 and 46) and "at least two different alternative sets of buffer management parameters" (claim 56), respectively.

C.   Claims 6-8, 17-19, and 30-32 should be allowable.

Claims 6-8, 17-19, and 30-32 depend either directly or indirectly from the claims discussed above. Accordingly, the Applicants respectfully submit that these dependent claims are allowable for the reasons given above for the respective parent claims.

Ozkan is even further from teaching or suggesting "selecting" as recited in claims 6, 17, and 30, respectively, "interpolating" as recited in claims 7, 18, and 31, respectively, and "extrapolating" as recited in claims 8, 19, and 32, respectively. The Examiner cited Column 5, lines 9-28 of Okzan for teaching the limitations of these claims. However, that portion of Okzan discusses motion vectors used to predict macroblocks of pixels based on similar macroblocks in

surrounding frames—it does not discuss rate data and buffer size data, and is even further from teaching of suggesting the above-cited language of claims 6-8, 17-19, and 30-32, respectively. The Examiner also cited Column 11, lines 5-57, but that section also does not teach or suggest "selecting" as recited in claims 6, 17, and 30, respectively, "interpolating" as recited in claims 7, 18, and 31, respectively, and "extrapolating" as recited in claims 8, 19, and 32, respectively.

D.   Claims 2-4, 9-11, 13-15, 20-22, 24-26, 28, 29, 33-38, 40-42, 45, 47, 49, 50, 53-55, 57-60, and 63-66 should be allowable.

The remaining claims rejected under § 102 all depend either directly or indirectly from the claims discussed above. Accordingly, the Applicants respectfully submit that these claims are allowable for at least the reasons given above for the respective parent claims. The Applicants will not belabor the separate patentability of these claims at this time.

Claim Rejections – 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 5, 16, 27, 43, 44, 51, 52, 61, and 62 as being unpatentable over Okzan in view of U.S. Patent No. 8,873,629 to Morris (Morris). The Applicants respectfully disagree.

The claims rejected under § 103 all depend either directly or indirectly from the claims discussed above. Accordingly, the Applicants submit that these claims are allowable for at least the reasons given above for the respective parent claims. The Applicants will not belabor the separate patentability of these claims at this time. Morris does not make up for the deficiencies noted above for the respective parent claims. Accordingly, the Applicants respectfully submit that these claims are allowable.

Conclusion

The claims in their present form should now be allowed. Such action is respectfully requested. The Examiner is invited to call the undersigned attorney at the telephone number below if the Examiner believes that doing so would further the prosecution of the present application.

Respectfully submitted,

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